

SECRET
US OFFICIALS ONLY

CLASSIFICATION

SECRET

SECRET

CENTRAL INTELLIGENCE AGENCY

REPORT

50X1-HUM

CD NO.

50X1-HUM

COUNTRY Soviet Zone Germany

DATE OF
INFORMATION 1949 - 1950

SUBJECT Economic - Power

DATE DIST. 4 Dec 1950

50X1-HUM

NO. OF PAGES 24

SUPPLEMENT TO
REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACT NO. 18 U. S. C. 793 AND 794, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

50X1-HUM

REPORT ON POWER IN SOVIET ZONE GERMANY FOR 1949

I. PRODUCTION PLANNING

A. Power Plants

In May 1948 the first basic figures for minimum production by the power plants in 1949 were issued to the newly formed Power Districts VVB (Z) [Federation of People-Owned Plants (Zone)]. The figures were discussed by the planning committees of the plants and modified to some extent in accordance with the repair plan. Since it had been planned to use the year 1949 principally for reconstruction and major repairs, so that in 1950 the considerably higher production goals could be attained with the increased capacity, the production plans for 1949 provided for a total production of only 5,756,200,000 kilowatt-hours.

The termination in May 1949 of the blockade imposed by the Western powers, which made it possible to restore to operation the units repaired by the AEG (General Electric Company) in West Berlin, also meant that the production of electricity increased correspondingly, since to some extent the capacity of the power plants and the number of hours of use had increased in the meantime. With a production of 6,283,000,000 kilowatt-hours, the plan was fulfilled 109.1 percent. There were no large increases in production until the second half of the year, except for Power Districts East and South, where the very good water supply during the second quarter had an effect on the hydroelectric plants.

At present, the increased performance requirements can be covered only in part by better utilization of the reserves of existing power plants, most of which are over-age. A more intensive effort must be made to shift the consumption of current away from the periods of peak demand to hours when the load is less. Within a period of 2 years there has been an improvement in the amounts reported for the third Thursday of each month (by plants having production assignments) of from 1:1.76 to 1:1.42, i.e., on 15 December 1949 the peak daily consumption was 1.42 times the night minimum. The sum of the peak outputs of

- 1 -

CONTROL/US OFFICIALS ONLY

CLASSIFICATION

SECRET

SECRET

STATE	<input checked="" type="checkbox"/> NAVY	<input checked="" type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY	<input type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY	<input type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY	<input type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY	<input type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY
ARMY	<input checked="" type="checkbox"/> AIR	<input checked="" type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> ARMY	<input type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY	<input type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY	<input type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY	<input type="checkbox"/> NAVY	<input type="checkbox"/> MARINE	<input type="checkbox"/> AIR	<input type="checkbox"/> ARMY

SECRET

SECRET

50X1-HUM

these plants for the same arbitrary report day increased to 2,668 megawatts, the simultaneous peak output to 2,541 megawatts. On 21 December 1949, the sum of the peak outputs reached its highest point, 2,706 megawatts. This would presumably mean a calculated simultaneous peak output of 2,575 megawatts. In comparison with the winter of 1948-49, there has been an increase in capacity of about 200 megawatts (simultaneous).

Plants under the Main Department for Power contributed to this result to the extent of 1,067 megawatts of peak output (sum), or 1,015 megawatts of simultaneous output. The increase in comparison with the winter of 1948-49 is about 45 megawatts (simultaneous).

The power plants in Power District North fulfilled their production quota 107.3 percent. The following plants did not attain the production goals: Wolgast (damage to machines), Finow (damage to machines and boilers), the diesel-operated peak plant at Hennigsdorf, and the three hydroelectric plants in Mecklenburg.

In Power District East only the hydroelectric plants at Aue, Kriebstein, and Wurzen did not contribute to the 112.8-percent fulfillment of the quota.

In spite of considerable difficulties at the Zschornowitz power plant, Power District Center was able to report 105.3-percent fulfillment of the plan, although the Magdeburg power plant did not attain its quota because of repeated damage to the machines.

In Power District West the Gross-Kayna Plant did not attain its goal for the first half year because the machines were out of order for a considerable time. However, with special utilization of equipment during the second half year the deficit was made up, and the year's goal was fulfilled 109.1 percent.

Power District South reported the highest percentage fulfillment of the plan, 114.6 percent, in spite of the fact that several hydroelectric plants (Burgkammer, Eichicht, Einhausen-Haselmuehle, Hoerschel, Hohenwarte, and Unterepreilipp) did not reach their quotas because there was not a sufficient supply of water.

Percentage contributions to total production and the percentage fulfillment of total yearly quotas for the various power plant groups are as follows:

	<u>Percentage Share in Production</u>	<u>Percentage Fulfillment</u>
Power plants under Ministry of Industry		
Main Department for Power	36.8	109.1
Other main departments	10.2	105.5
Total	47.0	108.3
Land-owned plants	0.4	103.1
Privately owned plants	1.1	99.2
East Berlin	5.7	114.8
Total for German plants in the German Democratic Republic	54.2	108.8
Soviet corporations	44.0	115.6
Total for German Democratic Republic	98.2	111.6
West Berlin	1.8	107.9
Grand total	100.0	111.5

- 2 -

SECRET

SECRET

SECRET

50X1-HUM

SECRET

For the report year there was an export surplus of about 550 million kilowatt-hours. Two thirds of this amount is the result of fulfillment of the "Harkbe" contract, by which power is furnished in return for crude brown coal obtained from the British Zone of Occupation. The 85.5 million kilowatt-hours exported to Poland served to finance in part the crude brown coal imported from Poland for the Hirschfelde power plant. About 120 million kilowatt-hours were exported to the US Zone. Most of this was night current, but from November on part of it was delivered in exchange for the current imported from the British Zone via Hagenow in Mecklenburg (to maintain the voltage). The exchange with Czechoslovakia was very limited, as during the previous year. The export surplus has increased by 176 percent over 1948.

B. Gasworks

The plan for 1949 provided for production of the following:

	<u>Gas (million cu m)</u>	<u>Coke (tons)</u>	<u>Tar (tons)</u>	<u>Benzene (tons)</u>
Laender	520	893,000	32,100	4,750
East Berlin	150	205,000	8,000	1,700
Total	670	1,098,000	40,100	6,450

Fulfillment of the plan by all gasworks in the German Democratic Republic was as follows:

	<u>Gas</u>		<u>Coke</u>		<u>Tar</u>		<u>Benzene</u>	
	<u>Million Cu M</u>	<u>Per-cent</u>	<u>Tons</u>	<u>Per-cent</u>	<u>Tons</u>	<u>Per-cent</u>	<u>Tons</u>	<u>Per-cent</u>
Laender	600.0	115	878,700	98.4	44,276	138	6,017.5	127
East Berlin	166.1	111	233,100	114.0	11,510	144	2,716.5	160
Total	766.1	114	1,111,800	101.0	55,786	139	8,734.0	135

The gasworks in the German Democratic Republic, including East Berlin, exceeded the plans for all products, although the gasworks in the Laender processed only 97.6 percent of the amount of coal provided for in the plan.

Production of the 26 gasworks under the Main Department for Power increased as follows over 1948:

1949 Production

	<u>Plan</u>	<u>Actual</u>	<u>Percentage Fulfillment</u>	<u>1948 Production</u>	<u>Increase (%)</u>
Gas (million cu m)	112.6	127.0	113.0	99.3	128.0
Coke (1,000 tons)	208.5	198.0	95.0	166.9	118.8
Tar (tons)	7,535.0	9,383.0	124.5	6,588.0	142.5
Benzene (tons)	1,387.0	1,701.9	123.0	1,246.0	137.0

- 3 -

SECRET**SECRET**

SECRET

SECRET

50X1-HUM

The above table shows that except for coke the plan was fulfilled or exceeded. Only Land Sachsen and East Berlin exceeded the quota for coke. It should be pointed out that not only did the gasworks produce more quantitatively than in 1948, but that the specific yields increased extraordinarily in 1949, primarily for tar and benzene.

The yield of coke breeze was 30 percent. Since it is difficult to utilize coke breeze as such, attempts were made during the past year to make briquettes out of it, or to mix it with peat and make briquettes out of the mixture. Production of these briquettes is to reach large proportions in 1950. Attempts were also made to make the coke breeze into briquettes using various types of binders (tar distillate residue, sulfite lye, etc.); the experiments gave varying results, and are being continued.

1. Changes in Gasworks Capacity

The better coal supply made it possible to put idle gasworks back into operation, especially in Mecklenburg and Brandenburg. On 1 January 1949 there were 177 black-coal gasworks in operation; on 31 December 1949 there were 205. Their capacity was as follows (in millions of cubic meters):

	<u>1 Jan 1949</u>	<u>1 Jan 1950</u>
Zonal plants	132	145
Land plants	720	800
Total	852	945

In 1949, 26 gasworks were taken over under Zonal administration. One of these was in Brandenburg, 6 were in Sachsen, 12 in Sachsen-Anhalt, and 7 in Thuringen. When the furnace battery now under construction in the large gasworks in Magdeburg is put into operation, this plant will be able to process a maximum of 370,000 tons of black coal per year and will produce 145 million cubic meters of gas annually.

2. Control of Production

In the course of 70 visits to plants, inadequacies in methods of operation were pointed out and eliminated. A work program was drawn up for each plant for the improvement of technical and economic operational procedures. It was established that the condition of the plants has improved, a fact which is reflected in figures on the consumption of fuel for firing furnaces and for boiler house use. Even upon casual observation most of the gas plants make a much better impression than they did 2 or 3 years ago. Although the supply of materials was much better in 1949, there were still definite bottlenecks, such as deep-drawn sheets, boiler pipes, and cables, which hampered reconstruction in the plants.

3. Gas Production and Distribution

Total gas production is not identical with the yield of the gasworks, but is greater, since coking gas and gas from brown-coal plants are also piped into the long-distance gas network. Furthermore, gas was imported from Poland and from the Western Zones at Neustadt and at Goslar. A gas-exchange contract was concluded with Czechoslovakia, whereby Graslitz in Czechoslovakia receives gas from the Markneukirchen gasworks and the same amount of gas is imported from Czechoslovakia at Ebersbach and Gross-Schoenen.

- 4 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

The following figures show the progressive development of total gas production since 1946 (not including Berlin):

<u>Year</u>	<u>1938</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>
Million Cu M	785,000	560,000	564,050	692,517	843,509

From these figures it may be seen that total gas production for 1949 was 7 percent higher than for the last year of peace, 1938.

Following is a survey of gas production (in millions of cubic meters):

	<u>Production</u>	<u>Own Consumption</u>	<u>Surrendered</u>
Zonal plants under Main Department for Power	126,967		
Land-owned plants	483,799		
Total	610,766	12,901	597,865
Soviet corporations	161,366		161,366
Coking plants under Main Department for Coal	113,189	62,022	51,167
Total	885,321	74,923	810,398
Imports			33,111
East Berlin	166,042	8,526	157,516
Grand total	1,051,363	83,449	1,001,025

The following consumer groups are supplied in the German Democratic Republic (not including Berlin):

	<u>Million Cu M</u>	<u>Percent</u>
Industry	167,015	19.8
Public use	52,298	6.2
Small industries	71,698	8.5
Households	459,712	54.5
Losses	92,786	11.0
Total	843,509	100

Although consumption by households naturally accounts for the largest share of production, industrial requirements are increasing from year to year at the same rate at which gas production is increasing. The 11-percent loss reported is due to a great extent to the shortage of gas meters, since this leads to bulk purchases which are not metered.

- 5 -

SECRET

SECRET

SECRET
SECRET

50X1-HUM

C. Fuel for Zonal Power and Gas Plants

The 49 thermal power plants and the 26 gasworks under the Main Department for Power showed the following production figures as compared with plan figures:

1949	Production of Electric Current (million kw-h)			Steam to Out-siders (1,000 tons)	Gas Production (million cu m)		
	Planned	Actual	Percent		Planned	Actual	Percent
1st Qu	1,437.8	1,491.898	104	658	27.15	26.3	97
2d Qu	1,286.2	1,382.278	107	587	27.15	33.3	123
3d Qu	1,329.8	1,521.688	114	520	29.15	34.7	119
4th Qu	1,522.2	1,723.320	113	563	29.15	33.7	116
Total	5,576.0	6,119.184	110	2,328	112.6	127.0	113

The following table shows the amounts of fuel allotted on the basis of production goals and the amounts actually consumed (in 1,000 tons):

Type of Fuel	Allotment	Actual Consumption	Percent of Plan
Raw brown coal	12,526	12,846.5	102.5
Brown coal briquettes	1,354	1,440.0	106.3
Dry coal	120	92.4	115.7
Brown coal briquette chips		34.9	
Brown coal dust		11.5	
Black coal	417	409.6	98.4
Brown coal low-temperature coke	300	318.8	107.0
Gas coke breeze		2.9	
Diesel fuel	2.2	1.9	86.5

From the above it may be seen that the percentage consumption of fuel in excess of the plan was less than the percentage by which the production plan was exceeded. This was largely the result of the constant improvement and reconstruction of boilers, boiler firing installations, and machines in the power plants and of furnace installations in the gasworks. These repairs and improvements caused specific fuel consumption figures to drop rather considerably in some cases during the year. The high figure for consumption of dry coal, brown coal briquette chips, and brown coal dust may be explained by the fact that the power plants which use these fuels exceeded their production quotas by 19.2 percent. There was a considerable drop in the specific consumption of black coal,

- 6 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

from 1.27 to 1.11 kilograms per kilowatt-hour in the case of the power plants and from 2.19 to 2.03 kilograms per cubic meter for the gasworks. The specific consumption for the diesel power plants dropped from 0.255 kilogram per kilowatt-hour last year to 0.245. The principal consumer (Hennigsdorf) fulfilled only 94.2 percent of the quota.

Average daily deliveries and consumption of fuel during 1949 were as follows (in tons):

	<u>Av Daily Deliveries</u>	<u>Av Daily Consumption</u>
Raw brown coal		
Direct from mine	32,640	32,620
Via Reichsbahn	2,610	2,610
Total	32,250 [sic]	32,230 [sic]
Brown coal briquettes, including dry coal, brown coal briquette chips, and brown coal dust	4,350	4,325
Black coal (Sachsen and Silesia)	1,125	1,120
Brown coal low temperature coke (including coke breeze)		
Direct from coking plant	170	105
Via Reichsbahn and/or ship	800	800
Total	970	905

The allotment and delivery of fuels did not always run smoothly. However, it was possible to avoid plant shutdowns due to fuel shortages, except for a few brief periods. Certain deficiencies in the allotment system still exist and should be eliminated; for example, there is the problem of supplemental supplies and the disadvantages which develop in this connection (spasmodic deliveries, fees to be paid for holding railroad cars, uneconomic grades of fuel). Above all, transportation must be better planned and executed. Finally, some thought must be given to the fact that the production goals for power plants and gasworks for 1950 have been set so high that, aside from other factors (such as greater consumption of current during the hours when the load is light), they can be attained or exceeded only if the plants receive the necessary fuels in the proper grades and amounts. However, some of the fuel figures in the People's Economic Plan for 1950 are considerably below the amounts required. The deficits can scarcely be covered by the improvements in specific consumption which are still to be expected.

Total reserve stocks have increased as follows in comparison with the previous year:

- 7 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

	1 Jan 1949 (tons)	1 Jan 1950	
		Tons	Days
Raw brown coal (bunker)	87,364	93,590	2.6
Brown coal briquettes, including chips	77,841	86,475	22
Brown coal low temperature coke	44,722	65,696	73
Black coal	47,480	49,692	44

During the winter months, when coal consumption is considerably higher, these reserves would naturally not last for as many days of operation as specified above, since these figures were obtained by using the daily consumption average for the year. Thus, for example, the total reserves of brown coal briquettes on 1 January 1950 would last for only 17 days of operation at the December 1949 rate of consumption.

The Main Department for Power will continue its efforts to obtain the greatest possible results from the amounts of fuel provided, by improving the heating efficiency in its plants, by increased utilization of particles which rub off of brown-coal briquettes (breeze) and of briquette chips, by storing fuels as prescribed, and by enlarging the storage areas as required, so that both specific consumption and production costs will be reduced; at the same time, the Main Department for Coal must take measures to improve the quality of the fuels, and the Ministry for Transportation must be responsible for seeing that these fuels are transported to the plants as quickly and as expeditiously as possible.

II. REPAIR AND MATERIALS PLANNING

The People's Economic Plan made 23.742 million Deutsche marks available for major repairs to Zonal power installations for the year 1949. Of this amount, 60 percent was designated for the power plants, 32 percent for the power network and the transformer stations, and 8 percent for the gasworks. An amount of 21.163 million Deutsche marks was actually utilized, meaning that in value the plan was 89 percent fulfilled.

The goal for 1949, the first year of the Two-Year Plan, was to get the power plants into such condition that in 1950 it would be possible to produce and distribute 16 billion kilowatt-hours, in contrast to 14.3 billion kilowatt-hours in 1948. However, this output was reached ahead of schedule, in 1949.

The goals for the repair of power plants were: repair of 977.5 megawatts of turbogenerator capacity and of 5,852.7 tons per hour of boiler capacity. These goals were fulfilled as follows (in percent):

	<u>Planned Repairs</u>	<u>Planned and Unplanned Repairs</u>
Turbogenerators	72.5	92
Boilers	85.5	113.8

The plans for repairs to the network and transformer stations were fulfilled as follows:

- 8 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

1. Replacement of temporary wooden poles with iron poles: 60 percent
2. Replacement of damaged insulators: 100 percent
3. Painting of towers and iron structures: 50 percent
4. Maintenance of wooden poles: 100 percent
5. Installation of additional climbing rungs: 100 percent
6. General overhauling work on the network: 80 percent
7. Repair of large transformers: 90 percent
8. Overhauling and expansion of transformer stations: 70 percent

Repair work on gas production and distribution installations amounted to 80 percent of the plan. The following major projects were executed: (1) at the Chemnitz Gasworks a coking gas generator which may be considered the most modern of its kind was completed and put into operation; and (2) at the Schwerin Gasworks, a furnace block was built and put into operation.

It proved possible in 1949 to obtain an average of 80 percent of the materials allotted. The reason that 100-percent realization of allotments was not possible may be found in the difficulties which the supplier firms experienced in manufacturing and delivering the materials.

Particular bottlenecks were condenser tubes and copper cables, since the nonferrous metal rolling mill in Hettstedt was fully occupied with other urgent orders.

Only 60 percent of the allotment of finished products of the machine-building and electrical industries could be obtained, because delivery on the machines, motors, and transformers ordered cannot be made until the first quarter 1950.

Other scarce materials, which were obtainable only through imports, were boiler tubes, superheater tubes, blade steel, special electric motors and replacement parts, replacement parts for turbines, parts for the chamber furnaces in gasworks, galvanized steel cable, high-grade steels, heavy-current cable, and special machines.

The release of 1.3 million West marks for imports from West Germany sufficed to cover only a part of the urgent requirements. Also, the fact that because of well-known difficulties the deliveries of imports from the West did not begin until the second half of 1949 contributed to the nonfulfillment of the repair plan.

The special contributions of Activists and repair teams in the plants and of assembly teams in the network made it possible to reach the kilowatt-hour production planned for 1950 ahead of schedule, in 1949. It was therefore possible to raise the planned goal for 1950 to 18 billion kilowatt-hours.

Execution of the 1949 repair plan resulted in an increase in machine capacity of about 85 megawatts and an increase in boiler capacity of about 200 tons per hour in plants under the Main Department for Power. The following tables show repairs made to turbogenerators and boilers in 1949.

- 9 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

Repairs to Turbogenerators

Power District	Jobs Planned		Planned Jobs Completed		Percent of Plan	Jobs Completed Outside of Plan		Total Jobs Completed	
	No	Mega-watts	No	Mega-watts		No	Mega-watts	Mega-watts	Percent of Plan
North	18	165.2	12	96.3	58.5	2	26	122.3	74
East	20	263.2	14	189.7	72	5	62	251.7	96
Center	14	180.5	9	104.5	57.8	1	16	120.5	66.5
West	11	133.3	7	105.5	77.8	4	31.5	137	101.5
South	5	59.5	4	57	95.7	2	11.4	68.4	115
Total for Zonal plants	68	803.7	46	553	68.8	14	146.9	699.9	87
Community plants	7	173.8	5	155	89.2	4	44.9	199.9	114.5
Grand total	75	977.5	51	708	72.5	18	191.8	899.8	92

Repairs to Boilers

Power District	Jobs Planned		Planned Jobs Completed		Percent of Plan	Jobs Completed Outside of Plan		Total Jobs Completed	
	No	Tons/hr	No	Tons/hr		No	Tons/hr	Tons/hr	Percent of Plan
North	46	920.5	42	782.5	85	17	492	1,274.5	138.5
East	61	1,464	51	1,305	89.2	11	274	1,579	108
Center	40	1,426	25	913	64.1	19	570	1,403	104.0
West	34	670	29	634	94.7	10	91	725	108.2
South	13	501	13	501	100	--	--	501	100
Total for Zonal plants	194	4,981.5	160	4,135.5	83.0	57	1,427	5,562.5	111.8
Community plants	21	871.2	21	871.2	100	8	222.6	1,093.8	125.5
Grand total	215	5,852.7	181	5,006.7	85.5	65	1,649.6	6,656.3	113.8

- 10 -

SECRET

SECRET

SECRET
SECRET

50X1-HUM

III. INVESTMENT PLANNING

Half of the power installations under the Main Department for Power are more than 25 years old. They operate uneconomically and consume great quantities of coal. Therefore, even the first drafts of the investment plan for 1949 included reconstruction of a number of dismantled power plants. Those affected principally are: Trattendorf Power Plant (150 megawatts), Niederwarthe pump reservoir (80 megawatts), Hohenwarthe pump reservoir (40 megawatts), Zschornowitz auxiliary plant (80 megawatts), and Lauts auxiliary plant (80 megawatts), a total of 430 megawatts.

The reconstruction was comparatively easy, because a large portion of the necessary materials were available. The equipment for the power plants is still in the hands of the supplier firms in West Berlin and in the Western Zone, because the orders, which had been placed during the war and for which considerable sums had already been paid, had not been canceled. However, pending realization of these plans the Main Department for Power had to try to squeeze the last ounce of performance out of its over-age installations.

Thanks to the work of Activists, and because of careful planning, the attempt was successful.

The investment plan of the Main Department for Power provided for an amount of 30 million Deutsche marks. Of this, 22 million Deutsche marks was designated for major projects and 8 million for minor projects (i.e., projects valued at less than 250,000 Deutsche marks each). In the fall, the plan was cut down to 23.5 million Deutsche marks, but subsequently had to be restored to 25.25 million. The plan has been exceeded, inasmuch as about 30 million Deutsche marks have been used. At the beginning of the year it was not possible to proceed according to the plan, because the plan was not approved until March - April. In general, the plan concerned the construction of boilers and turbines. However, the outfitting of repair shops was also given great emphasis.

The plan for the construction of new boilers encountered great difficulties at first, because in the German Democratic Republic there were only three firms which made boilers, and they could not be regarded as adequate. The Hohenwarthe Steam Boiler Construction plant built small boilers almost exclusively. Although they had the shop installations to build large boilers, they did not have the personnel. The Meerane Steam Boiler Construction plant was so loaded down with reparations orders that it was out of the running for domestic production. The third plant, the Wolf-Buckau Machine Factory, is a Soviet corporation and cannot be drawn on for the purpose.

Construction of boilers was started on the premises of the former Bergmann Electrical Plant. New workshops, machine tools, and assembly equipment had to be built or procured.

The Elbe plant, which was attached to Power District Center, was designated to become a large-scale repair shop and a start was made toward equipping it.

Because of the previous impossibility of manufacturing boiler drums, steam accumulators, and boiler and superheater tubes in the German Democratic Republic, five boilers of out-of-date construction which were no longer needed at the Finkenheerd power plant were dismantled, and it was planned to use their drums, etc., in the newly built boilers. The following boilers are to be built utilizing these materials:

- 11 -

SECRET

SECRET

SECRET

50X1-HUM

SECRET

<u>Power Plant</u>	<u>Capacity (tons/hr)</u>	<u>Gauge Pressure/°C</u>	<u>Order Given</u>	<u>Delivery Date</u>	<u>Type of Firing</u>	<u>Mega-watts Gained</u>
Finow	50-64	18/420	29 Apr 49	31 Dec 49	Traveling grate, supplemental dust firing	6
Branov	50-64	18/380	29 Apr 49	31 Jan 50	Traveling grate, supplemental dust firing	5
Lauta	35	27/380	10 Jun 49	28 Feb 50	Feed grate	14
Lauta	35	20/380	10 Jun 49	31 Mar 50	Feed grate	
Lauta	35	20/380	10 Jun 49	30 Apr 50	Feed grate	
Kulkwitz	48-60	15/370	13 May 49	15 Feb 50	Mill firing, Kraemer mill	10

The boiler for Kulkwitz is to be built by the Hohenthurm Steam Boiler Construction plant, the others by the Bergmann-Borsig firm.

Work on the boilers was started at the same time as the dismantling at Finkenheerd, but it was hampered by difficulties in obtaining materials, so the delivery dates could not be met. Under present conditions, the delivery dates to power plants will probably be as follows: Finow, 1 March 1950, Bramow, 1 April 1950; Lauta, 30 April, 31 May, and 30 June 1950; and Kulkwitz, 15 February 1950.

Inadequate deliveries of structural iron for the scaffolding also delayed the work, especially when some of the sizes furnished were not those which had been promised, so that it was necessary to make changes in the construction. Boiler tubes had to be procured from the West, because Vesta also had considerable delays in production. Procurement of electric motors to operate the forced draft, etc., also involved great difficulties.

Construction of the following new boilers is also planned:

<u>Power Plant</u>	<u>Capacity (tons/hr)</u>	<u>Gauge Pressure/°C</u>	<u>Order Given</u>	<u>Delivery Date</u>	<u>Type of Firing</u>	<u>Mega-watts Gained</u>
Kulkwitz	60	40/440	13 Aug 49		Mill firing	12
Rositz	25	32	24 Jun 49	30 Jul 50	Trough feed grate	3
Erfurt	65-80	40/430			Traveling grate	10
Halle-Trotha	60	27/425			Feed grate	10
Leopold	95	53/470			Mill firing	5

- 12 -

SECRET**SECRET**

SECRET
SECRET

50X1-HUM

<u>Power Plant</u>	<u>Capacity (tons/hr)</u>	<u>Gauge Pressure / °C</u>	<u>Order Given</u>	<u>Delivery Date</u>	<u>Type of Firing</u>	<u>Mega-watts Gained</u>
Leipzig-North	120	33/425			Mill firing	18
Gross-Kayna	60	18/350			Feed grate	10
Potsdam	50	26/425			Traveling grate	7
Klingen-berg	160	37/450	Dec 1949	Mid-1951	Central grinding installation	35
Klingen-berg	160	37/450	Dec 1949	Mid-1951	Central grinding installation	35

The following firms are expected to manufacture the boilers: Meerane in Oschatz, "Trotha" in Halle, Hohenthurm Steam Boiler Construction, Elbe, and Bergmann-Borsig.

The blueprints for the above-mentioned projects are for the most part already completed. Negotiations concerning the placing of the orders are under way.

The outfitting of repair shops and finishing shops of the Main Department for Power has been given special attention. The following table gives a survey of the new machine tools procured for these shops in 1949:

<u>Repair Shop</u>	<u>Ordered</u>	<u>Delivered</u>
Nauen (transformer shop)	6	6
Oranienburg (meter workshop)	8	8
Elbe (boiler repair shop and boiler mounting)	16	16
Erfurt (transformer and electric motor shop)	27	27
Waldersee (transformer and motor shop)	8	8
Bueschdorf (transformer shop)	5	5
Goerlitz Machine Construction		
Order No 67	67	42
Special allotment from the MFM of the Soviet Control Commission		11 (5 of which could not be used)
Imports	4	

- 13 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

As far as gas production was concerned, fairly considerable expenditures were planned for the large gasworks in Magdeburg. Construction of Battery II is complete except for the mounting of the fittings. It cannot be put into operation until the furnace doors and frames are finished. So far, it has not been possible to get the casting done. At present a trial casting is being made at the Lucka Iron Foundry. If this proves satisfactory, Lucka will cast all the doors and frames.

The demands made of the power industry for 1950 are very high. They will be met only if adequate funds and materials are received, and also a supplemental allotment of about 20 million West marks. Unfortunately, the industry is still dependent to a large extent on the electrical industry of the West for execution of its plans, since Western builders built the installations and therefore possess the necessary tools and blueprints. Production in 1950 depends on the realization of construction plans. In any event, adequate raw materials (coal) must be furnished for production. All the machines are so constructed that they operate most economically at about 70 percent of capacity, but since they must be operated at almost 100 percent of capacity, this is of necessity at the expense of the heating economy, i.e., of coal consumption.

The time is ripe to begin construction of new installations in earnest, if requirements are to be met during the next few years. This does not mean only power plants for auxiliary requirements, but also modern replacements for the over-age capacity. An allotment of about 15 million West marks should be made available immediately, to assure receipt of the previously mentioned equipment which is still waiting, partially completed, in the Western sectors of Berlin and in the Western Zone. Furthermore, a request should be made to have the repair and investment plans for power put into the first priority group for 1950.

IV. MATERIALS SUPPLY

Only 80 percent of the materials allotted for 1949 were actually obtained. Since the Main Department for Power was not included in the list of top-priority plants, certain materials were completely unavailable.

The planned amounts of black metal castings could not all be delivered because some of the foundries had urgent orders from other approved recipients and from Karlshorst; the same was true to some extent of rolled products. In this case, it should also be mentioned that some of the plants are not in a position to roll the structural pieces which the power districts need. Sometimes the only materials which could be delivered were ungraded, uncut, and unannealed, and therefore not suitable for the requirements of the power industry. Therefore, such deliveries had to be refused.

Deliveries of nonferrous metals were 82 percent of allotments. They were hindered by the fact that the amounts allotted by the plan, especially aluminum, zinc, and lead, could not be delivered in their entirety because the suppliers also had difficulties with their deliveries of raw materials. Toward the end of 1949 there were also difficulties with deliveries of brass pipes, copper cables, etc., i.e., mainly products of the nonferrous metal rolling mill in Hettstedt.

Some of the electrical equipment allotted for 1949 cannot be delivered until the first quarter 1950. Transformers and motors are also still in process of manufacture.

- 14 -

SECRET

SECRET

SECRET

50X1-HUM

SECRET

The planned requirements of tires were filled 100 percent. However, this does not mean that all needs were covered. Considerable additional requirements have developed because of the rapid rate at which the tires wear out. No tires in sizes larger than 800 x 20 were delivered, because production of these sizes has not yet started.

The Main Department for Power was treated very badly in the allotment of bicycles and bicycle tires.

The following nine tables present data on production of electric current, consumption of fuel, and repair work for 1949.

Table 1. Production of Electric Current by Zonal Power Plants
Under the Main Department for Power
(million kilowatt-hours)

	<u>Power Districts</u>					
	<u>North</u>	<u>East</u>	<u>Center</u>	<u>West</u>	<u>South</u>	<u>Total</u>
1948 production	929.7	1,709.9	1,929.1	633.7	592.9	5,795.3
1st Qu 49						
Planned	237.2	450.5	503.0	166.0	142.0	1,498.7
Actual	249.182	469.199	513.699	155.798	140.459	1,528.337
2d Qu 49						
Planned	211.8	371.7	463.0	161.3	121.1	1,328.9
Actual	215.062	434.111	485.789	160.971	136.774	1,432.707
3d Qu 49						
Planned	226.8	397.5	462.0	163.3	120.1	1,369.7
Actual	244.964	464.024	509.013	197.691	150.862	1,566.554
4th Qu 49						
Planned	260.6	474.2	514.0	178.9	131.2	1,558.9
Actual	295.582	543.915	538.304	216.193	161.412	1,755.406
1949 total						
Planned	936.4	1,693.9	1,942.0	669.5	514.4	5,756.2
Actual	1,004.790	1,911.249	2,046.805	730.653	589.507	6,283.004
Percentage of 1948 production	108.1	111.8	106.1	115.2	99.5	108.4

- 15 -

SECRET**SECRET**

SECRET

SECRET

50X1-HUM

Table 2. 1949 Production of Electric Current
by Power Plants Which Have Production Orders
(million kilowatt-hours)

<u>Type of Ownership</u>	<u>1949 Production</u>		<u>1948 Pro- duction</u>	<u>1949 in % of 1948</u>
	<u>Planned</u>	<u>Actual</u>		
Power plants under Ministry of Industry				
Main Department for Power	5,756.2	6,283.004	5,795.3	108.5
Other main departments	1,653.7	1,745.907	1,591.3	109.6
Total	7,409.9	8,028.911	7,386.6	108.7
Land-owned plants	72.6	74.877	64.4	116.2
Privately owned plants	179.3	177.992	155.7	114.2
East Berlin	850.2	976.332	778.6	123.7
Total for all German plants in the German Democratic Republic	8,512.0	9,258.112	8,385.3	110.4
Soviet corporations	6,488.0	7,497.179	6,349.4	118.2
Total for German Dem- ocratic Republic	15,000.0	16,755.291	14,734.7	113.7
West Berlin	279.0	301.093	225.5	133.5
Grand total	15,279.0	17,056.384	14,960.2	114.0

Table 3. 1949 Production of Electric Current
by Power Plants Which Have Production Orders, by Laender
(million kilowatt-hours)

	<u>Mecklen- burg</u>	<u>Branden- burg</u>	<u>Sachsen</u>	<u>Sachsen- Anhalt</u>	<u>Thuringen</u>	<u>Total</u>
Zonal plants under:						
Main De- partment for Power	149.146	855.644	1,792.100	2,847.133	638.981	6,283.004
Main De- partment for Coal	--	266.688	269.104	410.116	113.965	1,059.873
Other main departments	--	65.772	57.293	390.869	172.100	686.034
Total for Zonal plants	149.146	1,188.104	2,118.497	3,648.118	925.046	8,028.911

- 16 -

SECRET

SECRET

SECRET

50X1-HUM

Table 3. (Contd)

	<u>Mecklen- burg</u>	<u>Branden- burg</u>	<u>Sachsen</u>	<u>Sachsen- Anhalt</u>	<u>Thuringen</u>	<u>Total</u>
Land-owned plants:						
For public consumption	3.591	20.342	12.695	24.821	2.402	63.851
For industrial consumption	--	3,860	--	--	7.166	11.026
Total for Land-owned plants	3.591	24.202	12.695	24.821	9.568	74.877
Privately-owned plants:						
For public consumption	--	--	--	--	10.306	10.306
For industrial consumption	--	--	22.810	140.563	4.313	167.686
Total for privately owned plants	--	--	22.810	140.563	14.619	177.992
Total for German plants:						
For public consumption	152.737	875.986	1,804.795	2,871.954	651.689	6,357.161
For industrial consumption	--	336.320	349.207	941.548	297.544	1,924.619
Total for all German plants	152.737	1,212.306	2,154.002	3,813.502	949.233	8,281.780
Soviet corporations	--	105.384	2,580.812	4,607.984	202.999	7,497.179
Total	152.737	1,317.690	4,734.814	8,421.486	1,152.232	15,778.959
East Berlin						976.332
West Berlin						301.093
Grand total	152.737	1,317.690	4,734.814	8,421.486	1,152.232	17,056.384

- 17 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

Table 4. Fuel Consumed by Zonal Power Plants and Gasworks
Under the Main Department for Power in 1949
(including figures on specific consumption)

Type of Fuel	Consumed to Produce Electric Current			Consumed to Produce Steam		Consumed by Gasworks		Total, Absolute (1,000 tons)
	Absolute (1,000 tons)	Specific (kg/kwh)	For Current Alone	Absolute (1,000 tons)	Specific (kg steam/kg fuel)	Absolute (1,000 tons)	Yield (kg gas/kg coal)	
Raw brown coal	11,899	2.59	2.78	909	2.20	31	2.58	12,839
Brown coal briquettes	1,332	1.295	1.325	32	4.48	38	3.30	1,402
Dry coal	73	1.22	1.54	19	4.26	--	--	92
Brown coal briquette chips	35	1.79	--	--	--	--	--	35
Brown coal dust	10	0.94	1.16	2	5.94	--	--	12
Black coal	133	1.18	1.23	6	6.13	270	0.472	409
Brown coal low temperature coke	310	1.15	1.185	9	4.00	--	--	319
Gas coke breeze	3	1.40	--	--	--	--	--	3
Diesel fuel	2	0.245	--	--	--	--	--	2
Brown coal distillate gas*	38	3.475	4.27	9	1.61	--	--	47

* Millions of cubic meters

Table 5. 1949 Consumption of Brown Coal and Brown Coal Briquettes and the Amounts of Electric Current, Steam, and Gas Produced From These Fuels

	Raw Brown Coal	Brown Coal Briquettes
Production of electric current		
Consumption of fuel (1,000 tons)	11,899	1,332
Production of current (million kwh)	4,600	1,027

- 18 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

Table 5. (Contd)

	<u>Raw Brown Coal</u>	<u>Brown Coal Briquettes</u>
Specific consumption of fuel (kg/kwh)	2.59	1.295
Production of steam		
Consumption of fuel (1,000 tons)	909	32
Steam produced (1,000 tons)	2,002	143.6
Specific consumption of fuel (kg steam/kg fuel)	2.20	4.48
Production of gas		
Consumption of fuel (1,000 tons)	31	38
Production of gas (million cu m)	82.0	125.8
Specific consumption of fuel (kg/cu m)	0.37	0.30

Approximately 7,500 tons of raw brown coal were consumed in addition for use in repair shops, for heating gas distribution installations, for premiums and bonuses to personnel, or for delivery to other plants.

Table 6. 1949 Consumption of Dry Coal, Brown Coal Briquette Chips, Brown Coal Dust, and Gas Coke Breeze

	<u>Dry Coal</u>	<u>Brown Coal Briquette Chips</u>	<u>Brown Coal Dust</u>	<u>Gas Coke Breeze</u>
For production of electric current				
Consumption of fuel (1,000 tons)	72.7	34.8	9.3	2.9
Production of current (million kwh)	59.7	19.5	9.9	2.05
Specific consumption of fuel (kg/kwh)	1.22	1.79	0.94	1.40
For production of steam (for outside delivery)				
Consumption of fuel (1,000 tons)	19.7	--	2.2	--
Production of steam (1,000 tons)	83.9	--	13.0	--
Specific consumption of fuel (kg steam/kg fuel)	4.26	--	5.94	--

- 19 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM

Table 7. 1949 Consumption of Black Coal and the Amounts of Electric Current, Steam, and Gas Produced From It

	<u>Consump- tion of Fuel (1,000 tons)</u>	<u>Production</u>	<u>Specific Consump- tion of Fuel</u>
Electric current	133.6	113.2 million kwh	1.18 kg/kwh
Steam	5.9	35,900 tons	6.13 kg steam/kg fuel
Gas	269.6	127.0 million cu m	2.13 kg/cu m

The by-products of the gasworks (coke crude tar, and crude benzene) are reported separately.

In addition, approximately 600 tons were used in 1949 for heating, for forge coal (in the workshops), and for tugs.

Table 8. 1949 Consumption of Brown Coal Low Temperature Coke, Brown Coal Distillate Gas, and Diesel Fuel

	<u>Brown Coal Low Tempera- ture Coke</u>	<u>Brown Coal Distillate Gas</u>	<u>Diesel Fuel</u>
For production of electric current			
Consumption of fuel	310,100 tons	38.3 million cu m	1,898 tons
Production of electric current (million kwh)	269.3	11.0	7.7
Specific consumption of fuel (kg/kwh)	1.15	3.475	0.245
For production of steam (for outside delivery)			
Consumption of fuel	8,800 tons	8.7 million cu m	--
Production of steam (1,000 tons)	35.1	14.0	--
Specific consumption of fuel (kg steam/kg fuel)	4.0	1.61	--

- 20 -

SECRET

Table 9. Repairs to Turbogenerators and Boilers in 1949, by Power Districts

	Power District North								
	<u>Peene- guande</u>	<u>Rostock</u>	<u>Stral- sund</u>	<u>Wolgast</u>	<u>Finken- heerde</u>	<u>Finow</u>	<u>Lauta</u>	<u>Pots- dam I</u>	<u>Total</u>
Planned repairs to turbo- generators									
Should be under repair									
No	1	3	2	2	2	2	2	4	18
Megawatts	15	13	8	4.8	50	31	27	16.4	165.2
Completed									
No	1	2	2	2	--	1	2	2	12
Megawatts	15	8	8	4.8	--	25	27	8.5	96.3
Still under repair									
No	--	--	--	--	2	1	--	1	4
Megawatts	--	--	--	--	50	6	--	3.3	59.3
Planned repairs to boilers									
Should be under repair									
No	2	3	5	2	9	8	14	3	46
Tons/hr	100	48.5	55	44	278	112	231	52	920.5
Completed									
No	2	3	5	2	6	8	13	3	42
Tons/hr	100	48.5	55	44	165	112	206	52	782.5
Still under repair									
No	--	--	--	--	2	--	1	--	3
Tons/hr	--	--	--	--	58	--	25	--	83
Repairs completed outside the plan									
Turbines									
No	--	--	--	--	--	--	2	--	2
Megawatts	--	--	--	--	--	--	26	--	26
Boilers									
No	--	--	--	--	5	--	12	--	17
Tons/hr	--	--	--	--	263	--	229	--	492

(Adjusts page 22 here)

SECRET

SECRET

50X1-HUM

Table 9 (Contd)

Power District East							
<u>Hirsch- felde</u>	<u>Kulkwitz</u>	<u>Chemnitz</u>	<u>Dresden</u>	<u>Leipzig North</u>	<u>Leipzig South</u>	<u>Pleissa</u>	<u>Total</u>
5	2	3	1	5	1	3	20
78	35	62	18	27.5	15	27.7	263.2
3	1	2	--	4	1	3	14
59	25	37	--	26	15	27.7	189.7
2	--	--	--	1	--	--	3
19	--	--	--	1.5	--	--	20.5
21	10	13	4	6	2	5	61
575	190	154	148	119	110	168	1,464
15	8	11	4	6	2	5	51
454	180	126	148	119	110	168	1,305
3	--	--	--	--	--	--	3
39	--	--	--	--	--	--	39
--	1	1	2	--	1	--	5
--	25	3	28	--	6	--	62
3	2	--	1	4	1	--	11
87	55	--	37	40	55	--	274

(Adjoin page 21 here)

- 22 -

(Adjoin page 23 here)

SECRET

SECRET

50X1-HUM

Table 9 (Contd)

Power District Center				Power District West					
Zschorn- witz	Harbke	Magde- burg	Total	Gross- Kayna	Halle Th.	Leo- pold I	Leopold II	Bleiche- rode	Total
7	5	2	14	5	2	2	1	1	11
113	27.5	40	180.5	65	22	14.3	24	10	135.3
3	4	2	9	4	1	1	1	--	7
49	15.5	40	104.5	56	12	13.5	24	--	105.5
--	1	--	1	1	1	--	--	--	2
--	12	--	12	9	10	--	--	--	19
25	7	8	40	7	7	13	2	5	34
852	259	315	1,426	290	115	79	114	72	670
13	5	7	25	7	7	10	2	3	29
519	124	270	913	290	115	74	114	41	634
1	--	1	2	--	--	--	--	1	1
40	--	45	85	--	--	--	--	15	15
1	--	--	1	1	2	1	--	--	4
16	--	--	16	15	11.5	5	--	--	31.5
10	9	--	19	2	1	6	--	1	10
74	496	--	570	40	10	31	--	10	91

SECRET

- 23 -

(Adjoins page 22 here)

SECRET

SECRET

(Adjoins page 24 here)

50X1-HUM

Table 9 (Contd)

Power District South				
<u>Breitgn.</u>	<u>Gispslb.</u>	<u>Erfurt</u>	<u>Bleiloch</u>	<u>Total</u>
1	--	3	1	5
10	--	29.5	20	59.5
1	--	2	1	4
10	--	27	20	57
--	--	1	--	1
--	--	2.5	--	2.5
6	4	3	--	13
207	159	135	--	501
6	4	3	--	13
207	159	135	--	501
--	--	--	--	--
--	--	--	--	--
1	1	--	--	2
5	6.4	--	--	11.4
--	--	--	--	--
--	--	--	--	--

(All jobs page 23 here)

- E M D -

- 24 -

SECRET

SECRET

SECRET

SECRET

50X1-HUM